

WHAT IS CLAIMED IS:

1. A process for producing a hardenable composition with high storage stability containing scaly silica particles which consist essentially of foliar secondary silica particles and have a laminated structure, said process comprising:
  - (1) a step of subjecting a silica sol, a silica hydrogel or hydrous silicic acid to hydrothermal treatment in the presence of an alkali metal salt to form tertiary agglomerated particles of the scaly silica in the form of porous three-dimensional disorderly agglomerates of foliar secondary silica particles, each secondary particle being formed by a parallel face-to-face alignment of a plurality of flaky primary particles which are overlaid one on another, and
  - (2) a step of disintegrating and dispersing the tertiary agglomerated particles of silica in an organic polymer in the form of an aqueous emulsion by a wet method.
2. The process according to Claim 1, wherein the disintegration and dispersion are carried out by means of a high speed mechanical stirring wet system pulverizing apparatus employing medium beads.
3. The process according to Claim 1, wherein the foliar secondary silica particles are a layered polysilicic acid.
4. The process according to Claim 1, wherein the main peak in the X-ray diffraction analysis of the foliar secondary silica particles in the hardenable composition

corresponds to silica X and/or silica Y.

5. The process according to Claim 1, wherein the organic polymer in the form of an aqueous emulsion is at least one homopolymer resin selected from the group consisting of an acrylic resin type, an epoxy resin type, a urethane resin type, a styrene resin type, a silicon resin type, a fluorine resin type, a vinyl chloride resin type and a polyester resin type, a copolymer resin made of at least two types of them, or a mixture or composite of at least two types of such homopolymer resins and copolymer resins.

6. A process for producing a hardenable composition with high storage stability containing scaly silica particles which consist essentially of foliar secondary silica particles and have a laminated structure, said process comprising:

(1) a step of subjecting a silica sol, a silica hydrogel or hydrous silicic acid to hydrothermal treatment in the presence of an alkali metal salt to form tertiary agglomerated particles of the scaly silica in the form of porous three-dimensional disorderly agglomerates of foliar secondary silica particles, each secondary particle being formed by a parallel face-to-face alignment of a plurality of flaky primary particles which are overlaid one on another,

(2) a step of disintegrating and dispersing the tertiary agglomerated particles of silica to foliar secondary silica particles by a wet method, and

(3) a step of disintegrating and dispersing the foliar secondary silica particles in an organic polymer in the form of an aqueous emulsion by a wet method.

7. The process according to Claim 6, wherein the  
5 disintegration and dispersion are carried out by means of a high speed mechanical stirring wet system pulverizing apparatus employing medium beads.

8. The process according to Claim 6, wherein the foliar secondary silica particles are a layered polysilicic acid.

10 9. The process according to Claim 6, wherein the main peak in the X-ray diffraction analysis of the foliar secondary silica particles in the hardenable composition corresponds to silica X and/or silica Y.

10. The process according to Claim 6, wherein the organic  
15 polymer in the form of an aqueous emulsion is at least one homopolymer resin selected from the group consisting of an acrylic resin type, an epoxy resin type, a urethane resin type, a styrene resin type, a silicon resin type, a fluorine resin type, a vinyl chloride resin type and a  
20 polyester resin type, a copolymer resin made of at least two types of them, or a mixture or composite of at least two types of such homopolymer resins and copolymer resins.

11. A hardenable composition with high storage stability having scaly silica particles having a laminated  
25 structure consisting essentially of foliar secondary silica particles each of which is formed by a parallel face-to-face alignment of a plurality of flaky primary

particles which are overlaid one on another, and fine particles of an organic polymer well dispersed in an aqueous medium, wherein the composition does not substantially sediment the secondary silica particles as a concentrate in a test for storage stability of a coating stipulated in JIS K5400.

12. The hardenable composition according to Claim 11, wherein the foliar secondary silica particles are a layered polysilicic acid.

10 13. The hardenable composition according to Claim 11, wherein the main peak in the X-ray diffraction analysis of the foliar secondary silica particles in the hardenable composition corresponds to silica X and/or silica Y.

15 14. The hardenable composition according to Claim 11, wherein the organic polymer in the form of an aqueous emulsion is at least one homopolymer resin selected from the group consisting of an acrylic resin type, an epoxy resin type, a urethane resin type, a styrene resin type, a silicon resin type, a fluorine resin type, a vinyl chloride resin type and a polyester resin type, a copolymer resin made of at least two types of them, or a mixture or composite of at least two types of such homopolymer resins and copolymer resins.

25 15. The hardenable composition according to Claim 11, which is a floor polish composition.